View metadata, citation and similar papers at core.ac.uk

brought to you by CORE

第9巻第1号　海外短期研修概要

雑誌名	青森県立保健大学雑誌
巻	9
号	1
ページ	53-59
URL	http://id.nii.ac.jp/1591/00001871/

青森保健大雑誌　9(1), 53－60, 2008

海外短期研修概要

海外短期研修概要

【出張期間】 2007年5月31日～6月7日

【学会名】 15th International WCPT Congress - World Physical Therapy 2007
カナダ（Vancouver）

【発表者名】 Hiroyasu Iwatsuki[1], Kazuhiko Shoumura[2], Takao Suzuki[1];
[1]Aomori University of Health and Welfare, [2]Hirosaki University

【発表論文名】 MORPHOLOGICAL EVIDENCE OF APOPTOSIS IN THE RAT KIDNEYS FOLLOWING STRENUOUS EXERCISE.

【趣旨】 PURPOSE: The presence of weakly bound Fe3+ and Fe2+ is very important in the pathogenesis of ischemia/ reperfusion injury of various organs, because they can catalyze the generation of highly reactive hydroxyl radicals (OH・) through Haber-weiss reaction. The purpose of this study was to demonstrate through visuals the distribution of Fe2+ and Fe3+ in the rats' kidney by acute exercise using perfusion-Perls and -Turnbull methods. RELEVANCE: This study is based on the prescriptions of physical fitness for the athletes. PARTICIPANTS: This study was carried out in accordance with the Guidelines for Animal Experimentation, Aomori University of Health and Welfare. Twelve male adult Wistar rats (8-12 weeks of age) were divided into three groups as control, exercise only once and 5 days of exercise groups. METHODS: The exercise-trained groups ran on a motor-driven treadmill (0 % grade) for 45 min at a speed of 25 m/min a day. The animals were anesthetized with intraperitoneal pentobarbital sodium (40 mg/kg) and transcardially perfused with the flushing solution, fixative and nonheme iron staining solution. After the perfusion, the rat kidney paraffin sections were carried out by DAB/ CoCl2 intensification to visualize nonheme iron. ANALYSIS: One-way analysis of variance followed by Bonferroni post-hoc comparisons were used to analyze the differences between each groups. RESULTS: 1) Some tubular cells positively stained for Fe2+ and Fe3+ exhibited nuclear condensation in 5 days of exercise group. 2) Fe2+ positive reaction product was distributed in the cortex and in the outer stripe of the outer medulla in rats during the 5 days of exercise. However, Fe2+ positive reaction product did not appear in those regions of rats that exercise only once. 3) High intensity-exercise causes an acute decrease in renal blood flow and on immediate increase in

regional blood flow after exercise. Therefore, extensive nuclear injury caused by generation of weakly bound Fe2+ and hydroxyl radicals within nuclei through reduction of intranuclear Fe3+ by superoxide (O2・-), and extrusion of injured nuclei into the tubular lumen. CONCLUSIONS: Some tubular cells positively stained for Fe3+ and Fe2+ exhibited nuclear condensation in the rat kidneys after strenuous exercise, suggesting that they are undergoing apoptotic cell death. IMPLICATIONS: We suggest that this study is based on the prescriptions of physical fitness for the athletes.

【出張期間】 2007年6月1日～6月8日

【学 会 名】 The World Confederation for Physical Therapy International Congress 2007, Vancouver, Canada

【発表者名】 Hiroaki Morita and Hideki Sato

【発表論文名】 EFFECTS OF EXERCISE ON SELF-RATED HEALTH IN RETIRED MEN IN JAPAN

【趣　　旨】 PURPOSE: It is known that the exercise performance status influences self-rated health, and findings on middle-age males of < 60 years (yr) of age have similarly been indicated. On the other hand, males are more susceptible to mental fatigue than females among white-collar workers. Furthermore, although higher self-rated unhealthy risk prevails in males of > 60 yr of age, studies on the relationship between self-rated health and exercise performance have not been attempted. The present study elucidated to analyze the relationship between self-rated health and the actual exercise performance status in retired males. RELEVANCE: Self-rated health not only affects life expectancy such as mean life expectancy, but also serves as a useful health index. This study demonstrated the necessary support of physical therapy related with the habit of continuous exercise in contribution to enhancement of self-rated health in male retirees. PARTICIPANTS: The subjects were 654 male retirees (>55 yr of age) who had retired from Japanese corporations within the past 3 yr. Of these subjects, 552 were in the middle-age group with age < 65 (mean age: 60.9±1.6) yr, while the remaining 102 were in the elderly group with age > 65 (66.4±1.6) yr. METHODS: The study was conducted via the mail system. Performance of exercise was evaluated with a 2-stage assessment system by asking the subject if he was "performing" or "not performing" exercise/sports at the time of the study. In monitoring the actual status of exercise performance, the increase and decrease

of performance frequency of exercise/sports was compared with the status before retirement, using a 5-stage assessments scoring system. Based on a 4-stage evaluation system, self-rated health was scored according to the self-rating health assessment method of Haga et al. ANALYSIS: By homogeneity analysis, the category of each assessment index was scored and distributed on 2-dimensional coordinates, and the position relationships of the middle-age and elderly groups with the respective categories were compared. RESULTS: Based on the results of homogeneity analysis, scores of the respective quantified categories were plotted, and categories with position-proximity correlation included "performing", "increased", "unchanged", "very healthy" and "just healthy" in the middle-age group. As for the elderly group, the categories were "performing", "decreased", "just healthy" and "not healthy". CONCLUSIONS: In the middle-age group, the performance frequency of exercise/sports in current exercise-performers was either increased or unchanged compared with the status before retirement; a tendency of excellent self-rated health was indicated. On the other hand, the performance frequency of exercise/sports in current exercise-performers of the elderly group indicated a mixed outcome; a tendency with good and poor self-rated health. IMPLICATIONS: Less than half of the Japanese population harbor excellent self-rated health. The findings in this study demonstrated that the middle-age male retirees performed or continued to perform exercise/sport at the same or greater frequency compared with the status before retirement, probably contributing to excellent self-rated health. Accordingly, educational activities from the aspect of physical therapy related to the habit of continuous exercise are considered necessary.

FUNDING ACKNOWLEDGEMENTS: This study was supported by grants from the Health Promotion Service for the Elderly, Ministry of Health, Japan (2000). ETHICS APPROVAL: The ethical aspects of the study were approved by the Health Promotion Service for the Elderly, Ministry of Health, Japan (2000), and the Research Committee on the Investigation Associated with Japan Health Club on Health Management and the Meaning of Life.

【出張期間】 2007年6月1日～6月8日

【学 会 名】 The World Confederation for Physical Therapy International Congress 2007, Vancouver, Canada

【発表者名】 Hiroaki Morita, Hideo Ito, Yasuhiro Sakuragi, Sangun Lee, Hideyuki

Kanbayashi, Keisuke Saito and Yoshinori Kanazawa

【発表論文名】 EFFECTS OF LOW-FREQUENCY VISITING PHYSICAL THERAPY ON ACTIVITIES OF DAILY LIVING AND FAMILY RELATIONSHIPS OF SUBJECTS IN REHABILITATION-DEPRIVED REGIONS

【趣　　旨】 PURPOSE: In Japanese regions deprived of home or facility rehabilitation resources (rehab-deprived regions), visiting physical therapy is difficult to implement despite the presence of subjects needing it. Visiting physical therapy has been reported to be effective even at a frequency of 1-2 times a week, but its frequency is often below this level in rehab-deprived regions. This study was designed to prospectively evaluate the effects of low-frequency visiting physical therapy continued over a period on activities of daily living (ADL) of home-cared disabled people in rehab-deprived regions and their relationships with caregivers (family relationships). RELEVANCE: This study demonstrated the effectiveness of low-frequency visiting physical therapy for supporting home-cared disabled people in rehab-deprived regions. PARTICIPANTS: The subjects were 84 home-cared disabled people in 5 towns or villages of rehab-deprived regions in Aomori Prefecture, Japan. The subjects were selected with cooperation by the local governments. They were divided into an intervention group (57 subjects; mean age 69.5±10.7 years) and a control group (27 subjects; mean age 70.5±8.5 years). METHODS: Visiting physical therapy was conducted by a team consisting of a physical therapist and a health care specialist such as a public health nurse once every 1-3 months. ADL were evaluated using a modification of the Barthel Index (BI) by Granger et al., and the family relationships were evaluated using the Evaluation Scale for Family Relationships of the Home-Cared Disabled (family relationship scale) of Ito et al., at 2 points, i.e., the point of initial evaluation during the intervention period (initial) and the point 6-24 months after the initial evaluation (second). ANALYSIS: The χ^2-test, residual analysis, Cramer's measure of association, structural equation modeling (mean structure models), logit loglinear analysis, and Wilcoxon signed-ranks test were used for statistical analyses. RESULTS: The mean BI was significantly higher at the second measurement (68.3±34.1) than at the initial measurement (63.2±33.0) in the intervention group (Z=-3.781, P=0.000), but no significant difference was noted in the control group. Whether the subjects received visiting rehabilitation or not was moderately related to changes in ADL ($\chi^2(2)$=8.347,

P=0.015) (Cramer's V=0.315, P=0.015), and improvements in ADL were observed more frequently in the intervention group. ADL of the intervention group improved even after adjustment of unevenness in subject assignment for the SEM, and the improvement rate was 3.89 times higher than in the control group. The score of family relationship scale was significantly higher at the second measurement than at the initial measurement in the intervention group, but this improvement was not ascribed to visiting physical therapy ($\chi^2(2)=0.645$, P=0.725). CONCLUSIONS: Visiting physical therapy by physical therapists was suggested to improve the independence level of ADL even when it is performed at a frequency of once every 1-3 months in a rehab-deprived region. Therefore, low-frequency visiting physical therapy is considered to be necessary in order to support home-cared disabled people. However, the improvements in the family relationships may have been caused by factors other than visiting physical therapy.

FUNDING ACKNOWLEDGEMENTS: This study was supported by a grant for Health Science special study at Aomori University of Health and Welfare in 2001. ETHICS APPROVAL: The ethical consideration for this study was approved by the Ethics Committee of Aomori University of Health and Welfare.

【出張期間】 2007年10月10日～2007年10月12日

【学 会 名】 23nd Conference of Alzheimer's Disease International (Caracas, Venezuela)

【発表者名】 Haruka OTSU, Shigeko TAKAYAMA, and Yoko WATANABE

【発表論文名】 Wandering behavior in elderly people with Alzheimer's Disease in relation to the degree of impaired cognitive function

【趣　　旨】 Purpose: The purpose of this study is to demonstrate the characteristics of wandering behavior, which is one of the Behavioral and Psychological Symptoms of Dementia (BPSD), in relation to the degree of impaired cognitive function.

Methods: The participants in the study were ten elderly wanderers with Alzheimer's disease aged over sixty-five years old who could communicate with others verbally and express opinions by themselves. Their impairment level was moderate to severe. The research was carried out in two nursing homes. The interviews focused on why they were wandering, what they were doing, and how they felt when they wandered. Data analysis was carried out qualitatively.

Results: With regard to cognitive impairment, 4 were classified as

moderate and 6 as severe. There were 3 males and 7 females. The average was 79.6 years old. There emerged four purposeful types and one purposeless type of wandering. The former include *desire to work, desire to go home, desire for human interaction*, and *physiological factors*. Irrespective of the degree of impaired cognitive function, all wanderers except for three participants exhibited *work* type. 7 out of 10 participants, regardless of the degree of impaired cognitive function, fell into the *going home* type. With regard to *interaction* type, both groups exhibited this type of wandering. However, some situations of *interaction* type applied only to moderately impaired participants. The *physiological* type, exhibited in situations such as the need to excrete, thirst and appetite for eating, and expression of emotion, was found in 7 wanderers regardless of the degree of impaired cognitive function. However, situations involving physical incidents such as itching were peculiar to one resident with severe impairment. The *no purpose* type was observed in 3 out of 4 of the moderately impaired participants and in half of the wanderers with severe cognitive impairment.

Conclusion: Regardless of the degree of impaired cognitive function, all participants exhibited two or more types of wandering behaviors. Severe impairment participants tend not to be able to express more uncomfortable situations than moderately impaired participants.

【出張期間】 2007年10月2日～10月8日

【学 会 名】 The 3rd Annual-ALS/MND Nursing Symposium

【発表者名】 Kimie Sonota, Keiko Ishinabe, Y. S. Leibowitz, Yuki Nakayama, Sawako Kawamura

【発表論文名】 Why Can't ALS patients with HMV Continue Using a Communication Aid?

【趣　　旨】 Purpose: The use of personal computers facilitates communication for ALS patients. Although personal computers are easily accessible in urban areas, their availability is limited in Aomori Prefecture. Factors related to this difference were investigated by comparing users and former users within Aomori Prefecture as well as the environment in urban areas and Aomori Prefecture. Results: Comparison of personal computer users (n=2) and former users (n=3) revealed limited availability of models and peripheral equipment, in addition to a lack of operational support. In urban areas, these problems had been improved at the social level. Discussion:1) In both urban areas and Aomori Prefecture, the use of personal computers facilitated

communication and thereby contributed to improvements in QOL.2) Solutions to factors inhibiting use must be developed. In other local cities, patient groups cooperated to find solutions to factors inhibiting use. Conclusion : Solutions to factors inhibiting the use of personal computers and support for enabling easier use are necessary in local cities in areas such as Aomori Prefecture for improving the QOL of ALS patients.